



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,349	09/13/2004	Takafumi Atarashi	Q83600	3852
23373	7590	10/12/2006	EXAMINER	
SUGHRUE MION, PLLC			HAILEY, PATRICIA L	
2100 PENNSYLVANIA AVENUE, N.W.				
SUITE 800			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20037			1755	

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/507,349	ATARASHI ET AL.
	Examiner Patricia L. Hailey	Art Unit 1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 27 July 2006.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-30 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____.

Applicants' remarks and amendments, filed on July 27, 2006, have been carefully considered. No claims have been canceled; new claims 21-30 have been added.

Claims 1-30 are now pending in this application.

***Withdrawn Rejection***

The 112(2) rejection of claims 1-20 stated in the previous Office Action have been withdrawn in view of Applicants' amendments.

***Maintained Rejection***

The following rejection/of record has been maintained; the text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 102***

1. ***Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Bruckner et al. (U. S. Patent No. 6,689,205).***

Bruckner et al. disclose a multilayer interference pigment consisting of a transparent carrier material coated with alternating layers of metal oxides of low and high refractive index, which is obtained by alternate coating of the transparent carrier material with a metal oxide of high refractive index and with a metal oxide of low refractive index. See col. 1, lines 46-56 of Bruckner et al. (considered to meet the limitations of **claims 1-3, 10, and 15** regarding the substrate and the layers "having a different refractive index").

The thickness of the alternating layers is critical for the optical properties of the pigment. The thicknesses of the layers must be adjusted relative to one another, as the variation in color which takes place as the thickness of the film increases results from the intensification or attenuation of particular wavelengths of the light by interference. See col. 2, lines 26-56 of Bruckner et al., which also discloses that the thicknesses of the individual metal oxide layers, independently of their refractive index, ranges from 20 to 500 nm (considered to meet the limitations of **claims 4-6, 11-13, and 16-19** regarding the thicknesses of the coating layers).

The pigment can be used in a conventional manner for pigmenting paints, printing inks, plastics, cosmetics, and glazes for ceramics and glass; the pigment is preferably used for pigmenting agricultural films. See col. 4, line 59 to col. 5, line 11 of Bruckner et al.; this disclosure is considered to read upon **claims 8 and 9** regarding a coating composition, and a coating material formed by applying said composition thereto.

With respect to **claims 7, 14, and 20**, the limitations that the film-coated particles "are cut by processing them with focused ion beams" are considered process limitations and, as such, are not given patentable weight in claims drawn to products. Further, given that the claims in their present form do not recite any limitations regarding the particle size of the film-coated particles, pigment of Bruckner et al. is considered to inherently read upon the instant claims, as Patentees' pigment is a multi-layered pigment that encompasses Applicants' claimed "film-coated powder" or "multi-layer film-coated powder".

Additionally, because the reference disclosed a multi-layered pigment having layers of a specific thickness and of specific refractive indices, the characteristics recited in the instant claims (e.g., "film reflection intensity", "spectrophotometric characteristic", etc.) are considered inherently present in the pigment of Bruckner et al.

***New Ground of Rejection***

The following New Ground of Rejection is being made in view of Applicants' amendments, and in view of the newly discovered reference: European Patent No. 0 609 897.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. ***Claims 1-30 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent No. 0 609 897.***

The European Patent teaches a powder comprising a metal or metallic compound core having thereon at least one metal or metallic oxide layer having a uniform thickness, wherein the metal or metallic oxide layer is different from the metal or metallic compound core. See page 4, lines 3-10 of the European Patent., as well as Figures 1 and 2.

Examples of the core include iron, nickel, chromium, titanium, and aluminum.

See page 5, lines 1-17 of the European Patent.

Exemplary layer components include oxides of iron, nickel, chromium, titanium, zinc, aluminum, cadmium, zirconium, silicon, calcium, magnesium, or barium. See page 5, lines 20-33 of the European Patent.

With respect to the claim limitations that the film-coated particles “are cut by processing them with focused ion beams” are considered process limitations and, as such, are not given patentable weight in claims drawn to products. Further, given that the claims in their present form do not recite any limitations regarding the particle size of the film-coated particles, the powder disclosed in the European Patent is considered to inherently read upon the instant claims, as Patentees’ powder is a multi-layered powder that encompasses Applicants’ claimed “film-coated powder” or “multi-layer film-coated powder”.

Additionally, because the reference disclosed a multi-layered powder having layers of a specific thickness and of specific refractive indices (see page 6, line 49 to page 7, line 38), the characteristics recited in the instant claims (e.g., “film reflection intensity”, “spectrophotometric characteristic”, etc.) are considered inherently present in the powder of the European Patent.

In view of these teachings, the European Patent anticipates claims 1-30.

***Response to Arguments***

In response to Applicants' arguments that the transparent carrier material disclosed in Bruckner et al. no longer reads upon Applicants' "substrate particles", which now exclude oxides of silicon, the Examiner respectfully submits that the remaining disclosed carrier materials disclosed in Bruckner et al. continue to read upon the claim limitation "metal and a metal compound". Further, Applicants argue that "there is no motivation to one of ordinary skill to substitute an opaque material such as a metal for the transparent carrier material of Bruckner et al." The Examiner respectfully submits that Applicants' claims in their present form do not recite that the claimed substrate particles are opaque.

For these reasons, Applicants' arguments are not persuasive.

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Hailey whose telephone number is (571) 272-1369. The examiner can normally be reached on Mondays-Fridays, from 7:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 1700 Receptionist, whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Patricia L. Hailey/plh  
Examiner, Art Unit 1755  
October 5, 2006

  
J.A. MORENO  
SUPERVISORY PATENT EXAMINER